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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XXXI February, 1961 No 2

THE DEVELOPMENT OF A STATE SCHOOL HEALTH COUNCIL

HELEN M. WALLACE, M.D.; A. B. ROSENFIELD, M.D.; GEORGE B. LOGAN, M.D.; FRED R. HODOVAL; ROBERT HOHMAN; AND CARL KNUTSON

From the University of Minnesota School of Public Health; the Minnesota State Departments of Health and Education; the Minnesota Heart Association; the Minnesota Chapter of the American Academy of Pediatrics and the Minnesota State Medical Association

Recently a State School Health Council was formed in the State of Minnesota. Because it has been considered desirable that State health councils be developed, and because not all States as yet have one, it may be helpful to other States to review briefly the steps taken in Minnesota.

Historical Development in Minnesota

Previously in Minnesota, separate committees, either exclusively devoted to school health or including school health among other activities, existed in a number of voluntary health agencies, several professional organizations, and the State Congress of Parents and Teachers. In addition, for the past decade there has been an interdepartmental committee on school health of the State departments of health and education, the two official agencies legally responsible for the health of the school-age child. This committee over the years has made many constructive contributions towards the improvement of the health of school children. As more voluntary agencies reached program maturity they became increasingly concerned with their proper role in the field of school health. It became apparent that with this large number of agencies interested in the field of school health and the school age child, the possibilities of effective coordination of resources were diminishing rather than increasing. Not only were many different types of health education materials being developed independently by the various agencies, but school administrators and teachers began to feel the increasing pressure brought to bear by the multiplicity of approaches and materials.

Because of its primary emphasis upon the support of long-range research and its relatively limited resources the Minnesota Heart Association was a latecomer in the field of school health. The agency recognized the obvious importance of school health and its particular relevance to the child with cardiac difficulties, so in 1958 the school health committee of the Minnesota Heart Association was established.

The committee appointed was composed of many of the people in the State most actively interested in school health, those who had been leaders in this field in various professional, official and voluntary organizations. The chairman was a pediatrician active in the public health field.

From the very beginning of the committee's work there was a strong

feeling that the committee's role needed a careful and precise definition. The traditional highly focused purposes of a school health committee of a major voluntary health agency acting independently seemed incompatible with current trends and opinions.

Accordingly the question was raised as to whether this specific committee should restrict its activities to the traditional approach or rather, would it be a Statewide committee which would represent a more complete approach to the whole child and to school health programs in the broader sense be more effective? After considerable discussion, the school health committee of the Heart Association agreed that one of its primary roles would be to assume leadership in the beginning in bringing together representatives of all major official, voluntary, professional, parent, and related agencies to consider the possibility of establishing a State School Health Council.

This had been the original suggestion of a pediatrician member of the committee who at the time was chairman of the school health committee of the Minnesota Chapter of the American Academy of Pediatrics. Several meetings of these representatives were held with enthusiastic participation by twenty-four major State agencies under the temporary chairmanship of this pediatrician. As a result of these deliberations, articles of organizations were approved, an executive committee appointed, and officers elected.

Reasons for Enthusiastic Response by the State Agencies

The response of the various groups far surpassed the original optimism when this step was suggested. It was clearly apparent during the several discussions that there was a need for this coordinated approach, and it was equally apparent that, because of many State agencies, fragmentary and divisive efforts were being made in the school health field. The lack of a coordinated approach was illustrated by the fact that many of the voluntary agencies were developing and distributing their own health education materials to schools. As a result, some agencies were separately spending a considerable amount of staff time and funds, and they felt that perhaps by working together time that funds might be saved. Furthermore, these independent activities represented a "disease or disability approach," rather than an approach to the whole child. At the same time, some school personnel were beginning to feel under undue pressure because of the ever increasing number of agencies separately promoting their separate points of view and health education materials into their school health programs. Furthermore, some of the State agencies questioned the overall effectiveness of their respective school health programs, and felt that a coordinated effort might provide a more receptive climate for their resources, as well as be more economical. There was also expressed a need for a combined resource book of health education materials, from both official and voluntary agencies. This need was felt both by school staff and the agencies concerned.

Steps Taken

The Minnesota Heart Association called the first meeting with a total of seventeen agencies represented. The problem was outlined by the acting chairman. He pointed out that the number of agencies interested in some aspect of children's health was increasing, and that consideration

should be given to establishing a State School Health Council to deal cooperatively with the problems of school health. He envisioned the broad objectives of such a council as coordination, stimulation, and consultation. The point was emphasized that if this Council was expected to do an effective job of coordination and cooperation, organizations would necessarily have to submerge their specific interest programs as much as possible so that the "whole child" concept would be encouraged and accepted. Each representative in turn was given the opportunity to present his views on the formation of a State School Health Council. The consensus of opinion was that such a body would be worthwhile and valuable.

Two further steps taken:

1. In order to determine the scope of the Council, it was decided to contact all groups in the State with an interest in school health and invite their active participation on the Council. The Minnesota Heart Association agreed to do this.
2. Representatives of the six primary sponsors:
   Minnesota Heart Association, the State Department of Health, the State Department of Education, the State Congress of Parents and Teachers, the Minnesota State Medical Association, and the Minnesota Chapter of the American Academy of Pediatrics prepared proposed Articles of Organization for presentation at a subsequent meeting of representatives of those agencies which would elect to become functioning members of the Council.

An invitation was given to all groups with an interest in school health to become a participant of the newly formed State School Health Council. As a result, aside from the already committed seventeen agencies, an additional seven requests were received for membership.

This expression of enthusiasm displayed by twenty-four agencies was sufficient to warrant a more formal organization. Improved communication seemed to be the desire of each group.

It may be of interest to quote Article I, the Purpose, from the Proposed Articles of Organization.

"Article I—Purpose

The major purpose of the Statewide school health council is to promote effective school health programs. This can be accomplished by greater knowledge and understanding between health and related agencies of each organization's purposes, programs, policies, and procedures in the school health field, as well as respect for and understanding of similarities and differences. Joint planning and inter-agency cooperation would be desirable goals through this improvement in communication."

Specifically, the council will provide the representatives of participating agencies with the opportunity to:

(1) discuss common interests and objectives in school health;
(2) clarify policies, aims, and unmet needs of each organization;
(3) get specific information about the resources of each;
(4) plan how these resources can be most effectively used in the school-age population;
(5) explore ways of furthering inter-agency planning and evaluation;
(6) explore and develop activities leading toward joint programs in the school health field;
(7) explore ways of developing new programs and resources, if necessary.

Anticipated Activities and Results

As a result of the formation of the State School Health Council, it is anticipated that there will be closer liaison among the official agencies namely, the State Departments of Health, Education and Welfare; the voluntary health agencies; the professional organizations, the State Congress of Parents and Teachers; and with the local schools. It is expected that efforts toward improvement of school health programs in Minnesota will be jointly planned and coordinated. Representatives of voluntary health agencies have expressed the hope that they will have a better concept of the needs of school personnel, and therefore that they will be in a better position to be of assistance to the school administrator and his staff.

Representatives of voluntary health agencies have also expressed the hope that the State School Health Council, or a subcommittee of it, may serve as a screening committee to review and evaluate proposed health education materials. If this objective is achieved, it is anticipated that the materials produced will be of better quality and more helpful.

Still another sphere of activity includes steps which might be taken to improve the quality of school health work currently being carried on in Minnesota. This is of particular significance because of the concern being expressed throughout the country at the present time. For example, the Austin, Minnesota School Health Study which was presented at the 1959 annual meeting of the American Public Health Association demonstrated areas of the total school health program needing improvement. It is also expected that unmet health needs of school-age children will be uncovered, and that new services will be developed to meet these needs.

From the viewpoint of the individual school administrator, it is anticipated that it will be easier and less confusing for him to receive information as to available services from the many agencies interested in school health problems from one coordinated source, through the State School Health Council, rather than from multiple separate sources.

Other potential results of the formation of the State School Health Council include the possibility that the Council may be called upon to assist in the revision of the state school health curriculum.

It is hoped also that the establishment of the State School Health Council would mean a more effective means of coordinating information about health problems and health needs of school-age children to individual physicians, dentists, nurses, and other professional health workers. Furthermore, as materials and guides are developed, perhaps the Council may be helpful in interpreting more fully some aspects of the school health program to these individuals.

Summary

Two dozen official, voluntary, and professional associations have agreed in principle to coordinate their efforts in school health. A working structure has been adopted. Strong and decisive leadership has emerged from one of Minnesota's major voluntary health agencies. The Minnesota State School Health Council has the distinct potentiality of bringing together diverse efforts into a more productive and unified whole, thus improving the health of the school age child which is the principle objective of all the various school health committees.

THE BROOKLINE SCHOOL HEALTH STUDY[1]

MARJORIE A. C. YOUNG, Dr. PH.

Project Coordinator, Assistant Professor of Health Education, Harvard School of Public Health

Introduction

In 1955 as a result of permissive legislation and action by the School Committee, Health Department, and Board of Selectmen, the Town of Brookline[2] consolidated its public school health service program and other child health services. For the preceding three decades, public school health services had been under the jurisdiction of the School Department and all other child health services, including the parochial school health program, had been under the Health Department. During this long period the operation of the public school health service program was under the supervision of a local practitioner who was responsible to the Superintendent of Schools and the School Committee. This physician devoted himself wholeheartedly to the program, which was structured in accordance with his personal conception of what a school health service should be.[3] His private practice was always subordinate to his school health responsibilities. He was on constant call to administer emergency and other services that he felt were indicated. He was highly respected and liked by all levels of school personnel who considered his health service program to be one of high quality.

With the passage of the new legislation, the Director of Public Health was appointed by the School Committee to serve as Director of School Health Services. He, in turn, with the approval of the School Committee and the Superintendent of Schools, hired a full-time pediatrician as Director of Child Health Services to operate the total child health program of the Town. In actual practice, the Director of Child Health devoted about 80 percent of his time to public school health activities and about 20 percent to other Health Department programs.

Both the Director of Public Health and his Director of Child Health Services were eager to modify the existing school health service program and extend it in new directions. First aid and emergency care in the school setting were to be de-emphasized, the annual superficial physical examination was to be replaced by a more thorough periodic examination, and scheduled counseling clinics in each school were to be inaugurated. These initial recommendations for program changes by Health Department personnel were not immediately accepted by either school personnel or the School Committee. They liked the original program and felt secure in it and had to be convinced of the desirability of making changes. Furthermore, these changes were being recommended by newcomers who were not even acquainted with the school system.

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[1]Copies of the full report including questionnaires and report forms may be obtained on loan from the Health Education Unit of the Harvard School of Public Health, 55 Shattuck Street, Boston 15, Massachusetts.

[2]A suburb of Boston, with a total population of about 60,000.

[3]In succeeding pages, the term "school health" will refer always and only to the public school health program.

It was at this juncture that the Superintendent of Schools suggested that before any drastic change be made in the school health service program it would be wise to make a thorough appraisal of all facets of school health. He felt, and rightly so, that no one really knew what was being done in this field throughout the school system and that a carefully planned study would provide the data needed for long-range planning and program changes. This suggestion was readily endorsed by the Director of Public Health, who in turn recommended that a multi-agency committee be appointed to explore the possibilities of such a study. An ad hoc project planning committee was immediately constituted, with representatives not only from the Brookline School and Health Departments, but also from the Harvard Graduate Schools of Education and Public Health. This committee made the preliminary decisions relevant to staffing and financing the project and in July 1956, the Coordinator[4] was appointed under a joint contract between the Town of Brookline and Harvard University.

Project Development

Initial Steps

A necessary first step in the development of any new project is a through exploration of the major dimensions of the project: situational, statistical, geographical, historical, personal, attitudinal, and operational components must all be studied before realistic planning can be initiated. Therefore, the first two months were devoted (a) to preliminary discussions with the Superintendent of Schools and the Director of Public Health and his staff, and (b) to studying School and Health Department reports.

In September 1956, the Project Planning Committee was convened to meet for the first time with the Coordinator and to make some decisions regarding the scope of the project, preliminary research design, communication and channeling procedures, and the creation of a Technical Advisory Committee to work closely with the Coordinator on all technical research aspects of the project. This Committee was immediately constituted and included technical representatives of all four cooperating agencies, experts on school and public health administration, a statistician, and a social psychologist.

Technical Advisory Committee

Most Technical Advisory Committees never meet together as a group to make joint decisions but serve rather as a collection of individual specialists to whom selected technical matters are forwarded for their expert opinion and advice. There are very real values to be derived from group operation of a Technical Advisory Committee and these values accrue both to the coordinator and the Committee members themselves. From the perspective of a health educator, the group operation of the Brookline Technical Advisory Committee exhibited the following values:

1. It provided a source of professional support and security, since all decisions carried the weight of group judgment and approval.
2. It assured a higher degree of objectivity since several disciplines combined their resources in making decisions.

[4]The writer served as Coordinator throughout the study (July 1956–June 1959).

3. It encouraged a continuing, consistent concentration on the part of the coordinator, since she felt obligated to keep the Committee active and informed.
4. It enabled the Coordinator better to control the time aspects of the project and to establish a long-range schedule. Since she had to foresee the total range of research phases and procedures and preplan for all committee sessions, she could call committee meetings whenever the need was most salient, and with the foreknowledge that the needed decisions would be forthcoming at a definite time. This saved valuable time since there were no long delays associated with operation by mail and no need to write back and forth to individual members several times in order to reach compromise decisions.
5. It was easier to keep all members abreast of all decisions and details.

From the very beginning of the first meeting, the Technical Advisory Committee was a task-oriented group that grappled with every technical facet of the project.[5]

In brief, all details related to the development of a research design and to the carrying out of every phase of the research were decided jointly by the members of the Technical Advisory Committee. The Coordinator carried the chief responsibility for obtaining and maintaining effective collaboration of the Committee members and for developing optimal operating conditions for all Committee functions. The Brookline Technical Advisory Committee[6] met together for twenty-five working sessions, each of which consumed more than two hours of their valuable professional time. In addition, several of them served as members of designated subcommittees and all of them were used by the Coordinator, when needed, as individual consultants on special aspects of the project. Without this singular professional service many of the accomplishments and outcomes realized to date would never have materialized.

Project Objectives

Before tackling the formulation of an over-all research design, the Committee applied itself to the determination of general objectives. Three major objectives evolved from these preliminary discussions. The first was to study and document the roles, duties, and functions of all school personnel involved directly or indirectly in the school health program, in order to obtain a clear picture of current school health practices.

The second objective was to develop methods for determining and effecting needed changes in school health policies and procedures. This, of course, was intended to assist the health service personnel in accomplishing what they felt were needed changes and to assure the Superintendent of Schools and his colleagues that any changes that did result were indeed desirable ones.

The third objective was to determine some concrete and practical

[5]The members of this group had never before worked together on any project so that they really were not initially a group in the accepted sense of the term.

[6]In succeeding pages, "Committee" will be used to designate the Technical Advisory Committee.

methods by which the various people involved in the School Health Program could be brought together and work together. This was really the primary raison d'etre for the project. The former school health service program was almost entirely physician-nurse oriented. Under the new regime it was hoped that there could also be not only direct involvement of many other persons such as classroom teachers, custodians, cafeteria workers, and special teachers but also good cooperation among the several Town agencies directly concerned with the school health program.

Project Design

The Committee spent several prolonged, dynamic working sessions in developing a project design. To me, from the perspective of a health educator, these were the most fruitful in a long sequence of very productive meetings. Not often does such a high-level multidisciplinary group of experts cooperate on such a complex task, for developing all the many components of even such a simple research design as this is a complicated procedure. In the course of these deliberations, the group had to come to grips with all the important issues inherent in the problem. Since each expert viewed the problem constantly from his own specialized frame of professional reference, compromise decisions had to be made constantly in the interests of satisf'ing the expectations both of those without whom the project could not possibly exist (the School Department personnel) and of the professional workers in the Health Department who carried major responsibility for actual program operation. From these working seassions a research design gradually took shape. The project was to be accomplished in three phases.

A. Phase I

Phase I was to obtain baseline data on a wide variety of current school health practices and policies. The primary aim in collecting these data was not to suggest deficiency areas or areas needing change but rather to give as complete a picture as possible of existing selected health conditions so that in years to come individual school and system self-comparisons might be made at intervals. These baseline data cover the following four broad areas of the school health program: (a) services, (b) environment, (c) instruction, and (d) administration.

The chief instrument used in obtaining these baseline data was the individual interview schedule. Interview questions were deliberately phrased to describe actual policies and practices and to avoid judgmental and value connotations. At no time was a comparison with any set of published school health standards intended. The Committee devoted considerable time to each of the several hundred questions, deleting and modifying words that might have value connotations. In this manner four interview schedules were developed for use repectively with classroom teachers, custodians, nurses, and principals. These were then pretested on a sample outside the project universe, namely in two other public school systems in the Metropolitan Boston area.[7] The pre-testing procedure pointed up the necessity of rewording some of the questions

[7]Malden and Brockton.

and provided a reasonable estimate of the amount of time required for conducting the specific interviews.

At this point, the Committee grappled with the method to be used in selecting the Brookline interview sample. (Although there was unanimity regarding the desirability of interviewing the entire Brookline universe, practical considerations of time and finance precluded this possibility.) After much deliberation, the decision made was to interview all principals, school nurses, and chief custodians, and a 30 percent stratified random sample of all other full-time school personnel.[8]

In addition to the interview material, selected data on environments and practices were obtained from each school by direct observations. These served to evaluate some of the material obtained from the interviews and, unlike the data obtained from the interviews, they were judgmental in nature. This is inevitable since observations can be registered only in relative terms, using some definite criteria as a basis for comparison.

A third source of data were the School and Health Department records pertinent to the study. Early in the planning stages of the design, the Committee suggested that it would be useful and desirable to do some type of systematic analysis of all pupil health records. In accordance with this suggestion, the Director of Child Health Services, the Dental Health Consultant, and the Coordinator were appointed to devise a checklist for collecting appropriate data. In applying this instrument to the records, a 10 percent systematic random sample was selected. Every tenth record was pulled from the nurse's file in each school health suite after the record folders had been prearranged in sequential order from Kindergarten through Grade 8.

Following the development and pretesting of the instruments and the selection of sampling techniques, generic plans for scheduling the interviews and observations in each school were delineated by the Coordinator and sanctioned by the Superintendent of Schools. Although the principals had been previously informed by the Superintendent of the broad dimensions of the project, up to this point in project development they had had no face-to-face contact with the Coordinator. At the suggestion of the Superintendent of Schools, a special meeting of the principals was called for the purpose of formally introducing the Coordinator and discussing with them the procedures to be used in obtaining the proposed data. This meeting provided a much-needed opportunity to orient the principals to the long-range goals and values of the project and to clarify with them many of the project's technical aspects and the extent of their involvement in expediting the various procedures to be used in data-gathering.

All interview and observational data were collected by the Coordinator during the 1956–1957 school year and a *minimum* of one full working week was spent in each school. Data from the records were not tabulated until the fall of 1958, on the assumption that time is required to make dental and medical appointments and that the school nurses needed time to record follow-up data on findings recorded during the 1956–1957

[8]Three sampling groups were delineated: (1) Kindergarten through Grade 3; (2) Grades 4 through 6; (3) Grades 7 and 8 and Specialists. A 30 per cent random sample was selected from each of these levels in each of the eight schools.

school year. In accordance with the decisions of the Committee, the Coordinator tabulated the data separately for each of the eight elementary schools under the following six major categories:

a. Interviews with principals
b. Interviews with teachers
c. Interviews with nurses
d. Interviews with custodians
e. Observational data
f. Record analysis

The sequence of procedures in Phase I was delineated generally to implement the first project objective and specifically to obtain the baseline data essential in the "before" phase of a "before-after" type of research design. The health educator assumed complete responsibility for pretesting instruments, for collection and tabulation of all data, and for processing all data in the final form suggested by the Committee.

Summary of Selected Data Obtained During Phase I

The interview data reveal consistencies from school to school especially with regard to certain basic policies and practices emanating from the Central office of the Superintendent of Schools. For example, policies and procedures relating to physical examinations, psychological testing, cafeteria management, and physical education programs are very similar in all the elementary schools. On the other hand, the interview data reveal certain differences from school to school with respect to such items as counseling techniques, interpersonal relationships, communication mechanisms, curricular and extracurricular program implementation, scheduling practices, et al.

Some of the data from an interview with a principal or teacher are confirmed and reinforced by data from other interviews and observations, e.g., from one school there is a consistent theme of poor building maintenance throughout all the interviews and observations. Consistencies with regard to role perceptions are also revealed, for example: most teachers perceived the nurse as a person responsible for handling all examination, screening and follow-up procedures; the nurses perceived themselves in essentially the same way with respect to these roles.

Major inconsistencies were revealed between interview data and other data from record analysis and observation. To illustrate this point: custodians' expressed information on cleaning schedules and processes were not always confirmed by direct observation in the schools over several working days; also, some of the nurses' statements on counseling procedures, recording and nurse-teacher relationships did not correlate with information received from the teachers themselves or with data derived directly from the records.

No interpretation of the possible meanings of these consistencies and inconsistencies has been attempted, since there are so many uninvestigated factors involved.

B. Phase II (Experimental Phase)

After the baseline data had been collected (but before tabulation) attention was focused on the second and third objectives, namely: to develop methods for determining and effecting changes, and to determine

methods by which School and Health Department personnel could be brought together and work together. From the very beginning, the project design had made provision for an experimental self-study phase to be initiated after all interviewing and observations were completed. The Committee, in planning the project, decided that, in order to maximize any differences that might occur, the two elementary schools at both extremes of the socio-economic and ethnic spectrum should be selected for the self-study experiment. The six schools lying between the two extremes were to serve as controls.

The main objectives were initially defined for these groups as follows:

a. To define the health needs and problems in their specific schools as they see them.
b. To decide upon health priorities for their own schools.
c. To work on high priority problems of their own choosing in an effort to effect what they consider to be needed improvements or changes.

Before the groups were actively constituted, the Committee decided also that: (a) each group should be composed of the principal, nurse, and several faculty members representative of all teaching levels; (b) group leaders and recorders should be chosen by the group members; (c) the principal should not be eligible to serve as designated group leader; (d) the coordinator should serve as a resource person in the area of school health content for each of the groups and should not initiate activities or asist the group in making decisions; (e) other types of group members, e.g., parents or agency representatives, might be added as needed on an ad hoc basis.

Soon after the opening of school in September 1957, the Assistant Superintendent notified the principals in the two selected schools that their schools had been chosen to participate in the self-study phase of the project. He arranged for them to meet with him and the Coordinator for a preliminary orientation and discussion session that would provide an opportunity for the principals to ask questions and to obtain clarification before any definite steps were taken to activate the self-study groups. This session was needed not only to allay the principals' anxieties as to why their particular schools had been chosen but also to assess in advance the specific kinds of barriers and difficulties made explicit by the principals.

Shortly after this meeting, the Assistant Superintendent followed up personally with each principal and with the Coordinator in setting specific dates for the first meeting of the self-study groups.

Each group held eight meetings, about a month apart, and content records of each session were kept by both the group-chosen recorder and the Coordinator. The Coordinator also studied group process in accordance with a standard set of group observation categories selected by a designated subcommittee of the Technical Advisory Committee.

Study committees on various curriculum problems other than health have been operative in the Brookline School System over the years. The self-study school health committee, however, was different in its approach from the others in that its definitive tasks were not predetermined by the chairman and it had greater freedom to determine its own priorities. Under the former regime, as previously described, there was minimal involvement of the principals and teachers in formulating school

health policies and procedures. The self-study meetings were practically the first organized attempt to involve principals and teachers in policy and program formulation.

At the end of the designated study period (June 1958), the group in one of the schools disbanded, having fulfilled its task as defined by the research staff. The other group chose not to disband but to continue serving indefinitely as a school health committee. At their invitation, the Coordinator continued to meet with them and to play the same roles initially delimited. At the end of June 1960 this group was still holding regular meetings and planning further program developments.

Summary of Selected Data from Phase II

The records of the meetings indicate that both schools have specific health problems and that these were readily identified by members of the study group. The explicit problems of the two schools are quite different in both scope and character. The problems identified by school 1, e.g., interpersonal relationships, intramural communication, and mental health are quite complex in nature and comprehensive in scope. School 2 chose to work on problems of a somewhat more practical, less diffuse nature, e.g., first aid and emergency care and communicable disease control.

As revealed by the records, School 1 devoted its efforts mainly to discussion and did not work through any of its identified problems to a solution requiring definite program changes. School 2 combined discussion of its problems with simultaneous thinking through of suggested solutions that necessitated program changes. This seemed to result in the provision of constantly increasing impetus to further discussion leading to additional solutions.

Phase III

The third and final phase of the project will consist of a reapplication of the interview schedules and other data-gathering instruments to the same sample of individuals utilized in the first phase. These data will then be used to prepare "after" profiles of school health practices. A comparison of the baseline data obtained in Phase I with the "after" data collected in Phase III will provide information on specific changes in the health programs of the Brookline Public Schools. Selected changes can then be studied in depth through intensive interviewing and analytical techniques with a view toward cataloging the specific factors effective in producing change. Although no definite plans have yet been formulated for carrying out this phase of the study, it probably will be projected until 1962 or later.

Some Accomplishments to Date

As a direct result of the project increased understanding between School officials and Health Department staff has been achieved. Probably the most significant accomplishment to date has been the development of more frequent and effective communication between the School authorities and Health Department staff with a concomitant increase in mutual professional respect and trust between the two departments.

Direct requests from School officials for active participation of Health

Department personnel in several phases of the over-all education program have also materialized. For example, at the request of the Assistant Superintendent of Schools, a program was devised by the Health Department staff for orienting all new Brookline teachers to the Town's school and community health facilities and their operation. Health Department personnel have been consulted also in the preparation and procurement of health education materials for use in the schools. In turn, the Health Department has worked with school personnel in the planning and execution of a new tuberculin patch-testing program and in a continuing in-service education program for cafeteria workers and custodians.

In general summary it can be said that many positive values have already been realized from the project and that these are now being applied by personnel from the Brookline School and Health Departments to the mutual operational benefit of both.

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DENTAL HEALTH INSPECTION IN THE SCHOOLS

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The widespread activity in the promotion of dental health programs in the United States indicates that dental health has become a recognized major problem of national health conservation. The early loss of teeth resulting from dental decay represents an important physical and social defect among elementary school children. One of the primary objectives of any dental health program is the prevention of tooth loss through preventive measures. (1)

The President's Citizen Advisory Committee on the Fitness of American Youth (1957) indicated the importance of dental health in total physical fitness by the recommendation which states,

> "Every school should have a continuing program which tests the fitness of youth, develops attitudes toward sound body and healthy personality, and gives attention to correction of physical, emotional and mental maladjustments and defects."

One of the long-range goals recommended,

> "Continuing health supervision should be available to all children, either by the family physician and dentist or through a community resource." (2)

It is known that where no efforts are made to control dental disease through education, a school population will show upward of sixty per cent of the children are suffering from dental caries with additional numbers suffering from other forms of dental disabilities. However, these facts are not sufficient to determine the kind or the extent of the dental health program that will be required to solve the problem in any given school situation. Knutson states,

> "Effective application of measures for the control of disease depends to a great extent upon knowledge of the *manner* in which

> disease occurs in population groups. Collection of information concerning the characteristics of a disease is, therefore, an acknowledgment pre-requisite to intelligent and effective planning of a control program." (3)

There are several methods of collecting data. Among them *the survey* has been found to produce the amount and the type of data best suited for analyzing the dental health needs of school children. Selected items of information can be obtained which will determine the kind of dental health program most appropriate for a given school. The incidence of dental disease in the individual child and case histories for each child may be added to these data.

The objectives of the dental health program are naturally related to the broad objectives of the school. No one staff member in a school possesses all the resources that are needed for a broad and effective dental health program. The classroom teacher, the administrators, the health personnel and the dental health specialists form the team to promote better dental health.

In planning a program with due consideration for pupils' needs and interests, stated aims may be regarded as a checklist rather than as an inflexible pattern. Since the control of dental disease can best be accomplished during childhood it may be stated that the objectives of a dental health program in schools are,

1. to help every child to appreciate the importance of a healthy mouth through the life span.
2. to establish an understanding of the relationship of dental health to good general health.
3. to encourage the observance of dental health practices including personal care, professional care, proper adequate diet and good dental health habits.
4. to enlist the aid of all groups and agencies interested in the promotion of child health.
5. to correlate dental health activities with all generalized health programs.
6. to stimulate the development of resources for making dental care available to all children.
7. to enlist all dentists in providing dental health services for children.

When a dental health program is initiated in a school system it should be preceded by a survey of the school district to determine distribution and location of native and national groups; financial status of various groups within the community; types of industries and the prevailing wages; the total school population and its possible fluctuations; social agency facilities as sources of aid for indigent families; the past programs in dental health conducted in the schools; a thorough reading of reports of the general health program. Conferences with the school administrators will reveal the financial support that may be expected for the program. Dentists and dental hygienists are best qualified as the personnel responsible for conducting the dental health program. All local dentists should participate in the treatment phase of the program and lend assistance to the public relations phase in the community.

A good dental health program in a school system will cover three phases; (a) dental health services; (b) dental health instruction; (c) concern

for dental health treatment on the community level. The purpose of this paper is to discuss one phase of the dental health services, namely, the dental health inspection.

The term "inspection" indicates a cursory observation of the mouth and the teeth of each child. It includes clinical observation using a mouth mirror and explorer in good natural light or specially designed artificial light. The dental inspection is an aspect of health appraisal and should not be confused with the regular periodic dental examination conducted in the office of the family dentist. This type of examination is for the purpose of diagnosis and can only be performed by a dentist. The dental health inspection is not considered and should not be conducted as a diagnostic instrument. The results of the inspection are used to (1) estimate group dental needs; (2) facilitate planning to meet the needs; (3) provide a baseline for evaluating the efficacy of the dental health program over a period of years.

During the inspection valuable educational opportunities occur which should be utilized to their fullest potential. All health examinations are more fruitful for the individual if preceded by classroom activities about the method of conducting the inspection and the learning that should result. Thus, the child becomes an active participant in the dental inspection rather than a passive subject. During the inspection the child should learn the *general* condition of his dental health and the reasons for the procedures which are to follow, namely visits to the dentist, dental treatment, when and how to brush the teeth and the need to restrict sugars in the diet for the purpose of controlling dental decay.

The benefits of the dental inspection in schools are many.

1. It serves as a basis for the school dental health education efforts.
2. It builds a positive attitude toward the dentist and dental care.
3. The child and his parents are motivated to seek and to accept dental treatment as a part of their total health protection.
4. Teachers, dentists and others concerned with the dental health of children use the inspection as a fact-finding instrument.
5. Baseline and cumulative data are made available.
6. It provides information leading to the support of a sound dental health program in the community.

There has been much criticism concerning the medical and dental examinations or inspections in schools during the past decade. The medical examinations are now well-established and accepted as a procedure in the schools. The dental inspection is still under fire in many localities. The consensus is that medical and dental inspections, *if not considered as diagnostic* have a particular benefit as an educational experience for the child and the parents.

Some of the arguments presented against the dental inspection seek to show that parents misunderstand the purpose of the inspection and tend to depend on it rather than to seek regular periodic dental examination in the dental office. Quite to the contrary, it is an opportunity to persuade the parents that there is need for regular dental care for *all* children. This is accomplished by sending referral notices to the homes.

Again, it is said that the lack of follow-up for dental corrections nullifies the motivation and parents pay no heed to the "notice" from the school. If dental inspections are conducted purely for fact finding, this

may be the result, but a good dental health program provides for definite efforts to "Get the work done." In a recent survey the follow-through response of 71% was indicated by the return of "under care" forms by parents. (4) Dentists co-operate when they know the schools are trying to improve dental health and parents come to expect the referral note each year as a reminder that the time for dental care has come.

Another limitation suggested is that parents should be present at the dental examination and this is not always possible in schools. If parents are aware that children must have regular dental care during the school year and are notified to take their children to the family dentist, they are not prevented from being present, but rather stimulated by the school notice to take an active interest in the child's visit to the dentist. All children are advised to visit their dentists even though no "observable" defects are found during the dental inspection.

Children should acquire, early in life, the habit of expecting regular dental treatment. If school inspections are properly conducted this desirable health habit will be developed by personal initiative based on the desire of most parents to do what is best for their children, especially when it is suggested by the school. In addition the child desiring to be accepted by his group accepts his responsibility for dental care in an effort to attain good health as part of his physical and intellectual development. (5)

In conclusion, the evidence presented indicates that the dental health inspection in schools is a valuable health education medium as well as a fact-finding instrument and should be encouraged by the community, the school, the local dentists, and the parents. Because all children during their life span are affected by some type of dental disease or disability, dental health is the common concern of all parents. They stand in need of information as to their role in attaining dental health for children. No other health problem has such a wide distribution among the school population. Dental health, therefore, must be considered a major health problem of the schools. Appropriate steps are indicated to protect children against the loss of teeth during their school years.

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CORRECTION

In the October 1960 issue on page 317, it was indicated that the price of the publication, "Child Growth" by the American Medical Association was 15¢ for single copies. The correct price is 50¢.

RESEARCH OF INTEREST

WESLEY M. STATON, ED. D.
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Abstracts of selected research and reviews of research in school health education, health services and guidance, healthful school living, and health science . . .

Borozne, Joseph and Leslie W. Irwin. "Prevalence of Certain Harmful Health Misconceptions among Prospective Elementary School Teachers." *Research Quarterly* 31: 387 (Oct.) 1960.

Recognizing the crucial role of the elementary school classroom teacher in shaping the understandings and attitudes of pupils in health and safety, the investigators studied a large sample of prospective elementary teachers to determine the extent to which these subjects subscribed to false beliefs. Further, data were collected to find out if prospective teachers were aware of the harmfulness of health misconceptions. A valid and reliable health opinionnaire was constructed, evaluated, and administered.

Ten percent or more of the trainees believed 72 of the 130 misconceptions to be true. Mean prevalence of misconceptions was 20. Possibly of highest significance was the finding that subjects having college learning experiences in health, biology, and a combination of health and biology were—in that order—least likely to subscribe to misconceptions.

Rather startlingly, 39 percent of these prospective classroom teachers believed that "when training children one should recognize the fact that they are miniature adults and treat them accordingly." Other samples: 58 percent thought "the main purpose of a dentifrice is to kill bacteria;" 50 percent believed that "six-year molars are replaced with second teeth;" 37 percent agreed that "chewing on bones or hard objects strengthens the teeth;" 36 percent believed "it is a bad health habit to drink water while you exercise."

Somewhat reassuring is the fact that the 1044 subjects were freshmen students and thus had three more years of exposure to a teacher education curriculum which may have contributed to their health science background.

It would seem that, as a natural corollary, a study of some or all of these trainees at the conclusion of their professional preparation might prove to be a rewarding venture.

The researchers conclude that "greater emphasis should be given to health instruction at all education levels and that existing courses and curriculums for elementary school teachers be revised to incorporate units of study specifically designed to treat the subject of health misconceptions."

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Francis, Thomas, Jr.: "Preventive Medicine in 1985." *What's New* 25: 26 (Anniversary Issue) 1960.

Deciding that a look ahead was more important than historical remi-

niscences, the editors present in this issue a provocative series of articles which project prospects and possibilities in medicine and the health sciences for 1985.

Among the impressive array of scientific talent providing "educated speculations" on the future is Dr. Thomas Francis of polio vaccine fame and the University of Michigan. Dr. Francis draws sharp attention to the need for devoting continued effort toward "vigorous investigations of preventive intent." Disease prevention must be accorded a foremost position among the goals of research in the health sciences.

Glancing briefly over his shoulder, Dr. Francis reminds the reader of the more significant contributions over the past 25 years: sulfonamides and antibiotics; new vaccines for pertussis, tetanus, yellow fever, typhus, influenza, and poliomyelitis; such dietary preventives as niacin, riboflavin, thiamine, and the B_6-folic acid-B_{12} group; fluoridation of water supplies; better control of water and air pollution; improved methods in radiation safety; heightened efficiency in protection of workers against harmful substances; introduction of new chemicals for preserving mental health; and some gains in dealing with home and transportation accidents.

Pointing up the fact that the common infectious diseases still represent the major day-to-day threat to optimum health, the author predicts that:

(1) measles vaccine will be developed

(2) polyvalent vaccines will be available for the more common virus diseases and will be used early in life, later to be reinforced with additional inoculations or natural exposure

(3) new methods will be used for accelerating and prolonging the immune response

(4) chemicals may be added to food or water, or can be distributed generally in the face of epidemics or "special exposures"

(5) natural dietary substances or other biochemicals will be available to bolster the body's normal resistance to infection

(6) similar chemical protection will be used against radiation, toxic damage, and other physical agents and exposures.

New directions in research will result in new concepts of measurement of normal physiologic functions and reserves, better coordination in gathering and bringing together varied data, and more adequate testing of conclusions.

Out of all this should come such significant results as these:

(1) the basic abnormality in arteriosclerosis will become known

(2) effective ways of detecting the precoronary, the prediabetic, and certain types of the prepsychotic and prehypertensive will be developed

(3) the role of viruses in human leukemia and certain other cancers will be established

(4) vaccines for leukemia will continue to be studied

(5) genetic factors in certain disorders will be better understood but control will be impeded by cultural considerations

(6) congenital defects caused by intrauterine and prenatal disturbances will be reduced by vaccines and preventive medications

(7) advances will be achieved in education for and public acceptance of population control measures

(8) accidents from new modes of transportation will remain

as prominent threats to health, and subsurface and space exploration will create new hazards

(9) radiation control will be quite effective

(10) a clearer and more precise definition of normal health will result from intensified research in preclinical susceptibility and assessment of slight biochemical and physiological defects

(11) a science of health can be established through new ability to detect early minor deviations from health as reflected in a series of tolerance tests "to describe healthful competence."

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Montoye, Henry J., Collings, W. Doyne, and Gordon C. Stauffer. "Effects of Conditioning on the Ballistocardiogram of College Basketball Players." *Journal of Applied Physiology* 15: 449 (May) 1960.

Ten varsity college basketball players were studied to determine the influence of strenuous athletic training on the ballistocardiogram. Subjects were tested twice before the season, twice during the season, and once from 4 to 6 weeks following season's end.

Results showed that ballistocardiograms were not significantly affected by vigorous training. However, the authors attributed this to limitations of the direct-body ballistocardiograph which was influenced by changes in subjects' skin-fold fat.

As expected, heart rates of subjects decreased with training. Best measures of circulatory efficiency were obtained 1 to 1½ minutes after exercise.

Perhaps of most significance, the researchers found that a ratio of the post-exercise heart rate divided by the pre-exercise rate was not the best measure of condition since it tends to penalize the fit subject who has a low resting heart rate.

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Radike, A. W.: "Current Status of Research on the Use of a Stannous Fluoride Dentifrice." *Journal of the Indiana State Dental Association* 39: 82 (March) 1960.

This review provides a summary of the clinical studies, beginning in 1942, which resulted in development of an anti-caries dentifrice combining stannous fluoride and calcium pyrophosphate. Chief difficulty was in overcoming the high chemical reactivity of stannous fluoride (SnF_2) with conventional dentifrice ingredients. Extensive laboratory study resulted in the selection of ingredients that were compatible with stannous fluoride. Most important of these was the polishing agent, calcium pyrophosphate. The stannous fluoride-calcium pyrophosphate combination has been patented by the Indiana University Foundation.

During the course of the six clinical trials minor changes were made to improve the formula. The final three clinical tests involved use of the improved formula now available to the public. With subjects 6 to 19 years of age following three different types of tooth-brushing the percent reduction in one-year caries rates was: unsupervised brushing, 23 percent; supervised one time per day (subjects were also encouraged to brush at home), 34 percent; supervised three times per day, 57 percent. Previous study with older subjects indicated that there is no significant

difference in the degree of protection against caries at various ages up to 35.

Following a summarizing discussion of experimental design, methods, and techniques, the author concludes:

1. A stannous fluoride-calcium pyrophosphate dentifrice, properly formulated, has been shown to reduce the rate of tooth decay in humans.
2. From a statistical viewpoint it can be stated as a conclusion beyond all reasonable doubt that these clinical trial results, taken collectively, could not be due to chance alone.
3. Using the best criteria available for judging acceptability of clinical trial methods, these six tests have been conducted by adequate methods.
4. That the observed reduction in tooth decay was the result of using the SF–CPP dentifrice can be accepted as an established fact in the strictest scientific sense.

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Sabin, Albert B.: "Use of Live Poliovirus Vaccine in Attempt to Eradicate Poliomyelitis." Paper presented at the meeting of the American College of Preventive Medicine, 3 November 1960, San Francisco, California.

In this review of research and development leading up to the availability of a proven safe and effective live poliovirus oral vaccine, Dr. Sabin traces the numerous and successful field trials in Europe and certain American cities during the past 18 months.

The Sabin vaccine seems to have two significant points of superiority over the Salk vaccine which contains inactivated viruses: (1) by altering the susceptibility of the intestinal tract the chain of transmission is broken and both the disease and the paralytic viruses are eliminated; (2) the oral vaccine may well be the answer to the public's demonstrated reluctance to avail itself of the Salk inoculations.

Dr. Sabin, world-renowned research virologist of Cincinnati's Children's Hospital Research Foundation, says we have delayed too long to prepare for the 1961 polio season and that "unless something is done soon" we may not have the vaccine available for the 1962 peak incidence period. Dr. Sabin warns, "the country will pay for this in thousands of preventable cases of paralysis and death."

NOMINATIONS FOR 1961

Suggestions for officers and members of the Governing Council for the American School Health Association will be gladly received by the nominating committee. The immediate past-president Miss Lyda Smiley of La Mesa, California is chairman of the committee. Suggestions from the membership should be sent to her.

NEW TEACHING AIDS

COMMUNICABLE DISEASES (Official Report)

This paper-back ninth edition report titled, *Control of Communicable Diseases in Man*, provides information as reference for various groups of professional people who are concerned with the control of communicable diseases. Although the booklet does not substitute for standard textbooks, it serves as a guide and a source of materials in preparing regulations and legal requirements for the control of communicable diseases. The 234 pages include a preface, a table of contents, 41 definitions of terms, factual knowledge written in brief fashion of each of the diseases listed, and an index. 60 cents, 1960, American Public Health Association, 1790 Broadway, New York 19, New York.

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DENTAL HEALTH (Booklet)

This 30-page booklet, entitled "Dental Health Facts for Teachers," presents factual material concerning Dental Health. Included in the booklet are six chapters—Introduction, The Structure and Function of Teeth, Dental Caries, Malocclusion, Peridontal Diseases, Diet and Dental Health; excellent pictures, graphs and charts; suggested approaches to dental health education for grades one through twelve; resource materials which include books and pamphlets for both teachers and pupils; charts; posters; 16 mm films; and filmstrips are also included. 2–24 copies, 20 cents each; 25 copies, $4.15; 50 copies, $7.25; 100 copies, $12.50; 1960, The American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

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DENTAL HEALTH (Exhibit)

"Dental Health—Whose Responsibility?" (No. 3). This exhibit (5 feet wide, 6 feet high, 2½ feet deep), shows, by a series of five lighted transparencies, how responsibility for children's dental health depends upon the parents, the child, the community, the school and the dentist. FREE, 1960, American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

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DENTAL HYGIENE (Chart)

This chart, 21 by 25½ inches, entitled "How to Brush Your Teeth," presents a series of eight pictures illustrating one proper technique for brushing the teeth. At the top the caption reads: "Teeth should be brushed as soon as possible after eating. Use a brush small enough to fit comfortably in the mouth, and the dentifrice of your choice. After brushing the teeth rinse the mouth thoroughly by forcing warm water between the teeth to remove loose food particles and also as an aid in keeping the tongue, gums and teeth clean." A brief explanation of the brushing technique is placed under each of the pictures. 65 cents, 1960, The American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

EMOTIONAL HEALTH (Series of Booklets)

This popular series of four booklets uses cartoons with captions. The titles are as follows: "Worry-Go-Round," "Needlepoints," "Growing Pains," and "Satisfaction Guaranteed." The first of the series, "Worry-Go-Round," offers practical advice and suggestions in helping men to understand every day tensions and ways to relieve some of these tensions. The second of the series, "Needlepoints," deals with the every day tensions in a woman's life and suggests practical ways which are helpful in dealing realistically with their problems. The third, "Growing Pains," for parents and teen-agers, presents suggestions for dealing with situations which can result in creating tensions between parents and teen-agers. The last of the series, "Satisfaction Guaranteed," emphasizes the sense of personal fulfillment and pride which can be derived from working to the best of one's capabilities. FREE, 1960, The Connecticut Mutual Life Insurance Company, Hartford 15, Connecticut.

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EYE HEALTH (Pamphlet)

This four-page pamphlet entitled "Safe Play to Save Sight," presents specific suggestions for protection of childrens' eyes and for the prevention of eye accidents for both pre-school and school-age children. In addition to giving the leading causes of eye injuries among children, this pamphlet lists six general rules to promote safety education. 100 copies, $1.95; 1960, The National Society for the Prevention of Blindness, Inc., 1790 Broadway, New York 19, New York.

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NUTRITION (Bulletin)

This bulletin, a complete revision of Nutrition Education Series Pamphlet No. 1, offers a variety of pupil experiences and suggestions for making nutriton education in the elementary school function in pupils' daily living. It also offers some examples of the ways that various school personnel and specialists may help with the nutrition education program in the elementary school. There is a fine bibliography which includes materials for Nutrition Teaching, Nutrition Education and the School Lunch, films, books, bulletins, and pamphlets. A summary of ten important points to consider in developing effective programs of nutrition education in the elementary school is included on the last page of the booklet. 25 cents, 1959, Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

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NUTRITION (Chart, Food Models, Booklet)

This Demonstration Unit for Intermediate Grades consists of the following: a chart, in color, 21½ by 30 inches; 34 breakfast food models, three-quarter actual size, which show in pictorial form typical breakfasts eaten in six countries—Australia, Brazil, China, Egypt, Norway, and United States; two sets of clocks with movable hands which permit comparisons between countries; large labels with names of countries to be

inserted into slot at top of chart to identify each breakfast as it is shown; small labels of countries to be inserted in space on chart marked "THERE."

The 36-page booklet, entitled "It's Always Breakfast Time Somewhere" accompanied with a 4-page Teacher's Supplement, supplies essential information for proper interpretation of the food models. Chart-35 cents, Food Models-75 cents per set, Booklet-20 cents, 1960, National Dairy Council, 111 North Canal Street, Chicago 6, Illinois.

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NUTRITION (Comparison Cards)

Each set, contained in envelope, consists of 42 cards, 8½ by 11 inches. The cards for teen-agers are multicolor on white; those for adults are multicolor on cream. The major food values, contributed by 44 foods to daily nutrition are depicted by colorful vertical bar graphs which aid in the comparison of choices within each of the four basic food groups, as well as among snacks and desserts. These comparison cards, presenting up-to-date nutrition information, can be used by teachers, nurses, doctors, dietitians, high school and college students. They may also be used as a display or exhibit. $1.75 per set, 1960, National Dairy Council, 111 North Canal Street, Chicago 6, Illinois.

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NUTRITION (Game)

This is the newest Kellogg's Breakfast game called "Safari Breakfast Game" for lower and intermediate elementary grades. This game kit includes a colorful 18 by 15 inch wall chart, individual score cards for checking, records of the individual winners, individual pins for every class member, and blue ribbons for the winning team and for the three individual winners of the three losing teams. The easy rules for the game are printed on the wall chart—along with the essentials for a good breakfast according to the Iowa Breakfast Studies. FREE, 1960, Department of Home Economics Services, Kellogg Company, Battle Creek, Michigan.

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NUTRITION (A Portable Illuminated Display)

This portable display, with full-colored illuminated transparencies, 8 by 10 inches, shows the four essential food groups with the caption, "A Guide to Good Eating" printed at the top. The display, mounted on a 2-inch limed oak frame, has metal easels which prevent tipping.

Overall size is 25 by 39 inches; weight is 31 lb. which includes cardboard carrying case. $55.00 f.o.b., 1960. The National Dairy Council, 111 North Canal Street, Chicago 6, Illinois.

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HEARING (Leaflet)

This reprint titled "Prevention of Hearing Loss" written by Aram Glorig, M. D., discusses those with significant hearing defects, an explana-

tion of the three types of hypacusis, the causes of hearing loss, prevention of deafness, noise and hearing, and a summary in which Dr. Glorig describes prevention of hearing loss as follows:

1. "Education of doctors, parents, teachers, management and labor.
2. Control of hereditary defects, prenatal diseases, infectious diseases, obstructive pathology, acoustic trauma, and noise exposure.
3. Early detection by adequate screening, testing and follow-up."

10 cents per copy, 1960, American Hearing Society, 919 18th Street, N. W. Washington 6, D. C.

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SCHOOL NURSING AROUND THE U.S.A.

During the past few years, increasing numbers of school nurses have been employed by boards of education. Today, almost 10,000 nurses can be found in the educational field; many with little preparation or experience, and without qualified supervision, but many others with courage, perspicacity and strong determination to develop sound school nursing services for children.

Through the American School Health Association, and the Journal of School Health, school nurses have found help with their everyday work. Thousands of school nurses have shared and continue to share the experiences of the membership in annual meetings, and through the work of the School Nursing Committee and other committees concerned with school health.

Special effort is being made this year to encourage school nurses throughout the country to prepare reports of projects and studies which might be of interest in the development of program and service in school nursing. These reports will be reviewed and considered for publication in the Journal of School Health. All school nurses are invited to participate in an exchange of ideas to promote effective school nursing services.

A major responsibility of every school nurse is to develop with the administrator a systematic annual plan for reporting, analyzing, evaluating and developing the school nursing program and service.

Reports of this nature can provide the administrator with comprehensive information for program and budget planning within the framework of the total educational setting. The following outline suggests one method which might be used in any school system, to plan, implement, interpret and measure program and service in school nursing.

Name of School District
School Nursing Service

TO: Name, Superintendent of Schools
FROM: Name, School Nurse
SUBJECT: Growth and Development Of The School Nursing Service
DATE: January, 1961

Submitted herewith are proposed plans with briefs for your review and consideration preliminary to our forthcoming conference on the School Nursing Service for the 1961–62 school year.

I Statement of Purpose
II Status of the Present Program
III Future Needs in Program
IV Staff and Assignment of Schools
V Budget

Interpretation of the Outline

I *Statement of Purpose*
This section of the report explains the reasons for submitting the report, and may include statements of philosophy and goals.

II *Status of the Present Program*
This may be divided into two parts; strengths and weaknesses in the program and service. Attention is directed to annual accomplishment of goals, and areas in need of further consideration.

III *Future Needs in Program*
Needs are easily outlined and brought into focus in keeping with the weaknesses listed in II above.

IV *Staff and Assignment of Schools*
This section should point out specific needs in staff taking into consideration the many factors which determine staff assignment to schools, i.e., pupil load, school and community health needs, travel, preparation of the nurse, etc.

V *Budget*
The last section should categorize estimated costs of staff, equipment and supplies.

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THE TEACHING ROLE OF THE SCHOOL NURSE-TEACHER

DOROTHY C. TIPPLE

School Nursing Consultant, New York State Department of Education

Nurses employed by Boards of Education in New York State have had the title of School Nurse-Teacher since July 1927, in recognition that, as school employees, they function in a dual capacity—as nurses and as teachers. Yet for over three decades we have been asked by parents, teachers, and other professional workers: "why are you called a nurse-*teacher*?" and "*what* do you teach?" We would be happier if the latter question were worded: "*Whom* do you teach?" Most of us have very strong convictions regarding our role as educators, in spite of which we have frequently felt "on the spot" when confronted by these queries. It is apparent, then, that we have a responsibility to clarify and interpret our teaching functions.

There are several basic factors which may be considered as a point of departure:

1. Nursing is more than a profession with specific technical training for care of the sick. It is a *health* profession. The scope of professional nursing practice includes: promotion of health, prevention of disease, nursing diagnosis, nursing therapy and nursing rehabilitation. The unique contribution of the school nurse-teacher in helping to meet society's health needs lies *primarily* at the first level—promotion of health. And promotion of health must be essentially an educative process. We have passed through the era of telling people what to do about their health or of doing it for them. This was not sound educational practice and did not lead to the intelligent self-direction which is essential in order to maintain positive health of the individual and community. We thought, at one time, that education was simply a matter of imparting knowledge. We know now that education is a complex process and, in addition, is a two-way process. Unless the impartation of knowledge stimulates a reaction from the recipient, he has not been educated—he has only been

"told." This basic understanding, and its concomitant skills, are essential in order to achieve our objective—the promotion of health through education.

2. The school has specific but not sole responsibility for the health of children and youth. We recognize and encourage parental responsibility for provision of essential health care for children. We acknowledge the role of community health and welfare agencies in carrying out a great variety of health services. We look at school responsibility in relation to education, and we believe that the school health program is, in all of its ramifications, a part of the total school educational program.
3. We must be realistic enough to recognize that not all health education takes place inside the four walls of the school. By the time children come to school, many of their health values, perceptions, attitudes, and practices are firmly established. The influence of the home in this respect is a continuing and vital factor. We do compete with the superstitions and fads created by lack of accurate health information, and, more seriously, we battle the deliberate frauds and misconceptions promoted by some vested advertising interests. However, we must recognize the leadership role of the school in determining effective health learnings, and in supplementing and complementing the out-of-school health learnings of the child. More important, the pupil must learn how to evaluate the health knowledge which he is acquiring from all sources.

This preliminary, and somewhat philosophical approach, has presumed to establish the fact that the school nurse-teacher *does* participate in the educational program for the promotion of health and that the school *does* have specific, but not unlimited, responsibility for health education of children and youth. Now let us explore the variety of ways in which this is done.

For purposes of discussion, I would like to begin with the role of the school nurse-teacher in health instruction, which is the formal approach to health education. This is the part of health education which is developed in the classroom, following the same general pattern of instruction as in other areas of the curriculum. This implies, and I want to emphasize, that it is essential to have a master plan, a carefully developed, sequential guide or blueprint in health and safety education which has been cooperatively prepared in every school system *by the people who will use it.* We have penalized health education in the past as a legitimate subject in the curriculum by too much of a haphazard, unplanned, hit-and-miss approach. Often it is assumed that if we have the health service personnel going into the classroom periodically to give a short "lecture" on "health talk" that we are providing good health education. This concept is erroneous, for it has been effectively demonstrated that our good health education programs on the elementary level take place where the classroom teacher carries the on-going responsibility and provides the continuity, with consultant service from the health specialists in the school. On the high school level, the need is for a qualified health teacher to teach the health courses and coordinate the health learnings from other areas of the curriculum.

The school nurse-teacher has a definite role to play in both the development and implementation of the curriculum in health and safety education. This curriculum should be cooperatively planned by teachers, administrators and health specialists in the school. This master plan will recognize and include the health learnings and experiences which may be correlated with related units in the curriculum and with the health services. The school nurse-teacher, as a member of the curriculum committee, may assist in areas such as the following:

1. Determination of areas of specific health knowledge, or the desirable health learnings for pupils at progressive levels of maturity.

2. Determination of health needs and interests of pupils.
3. Compilation of health materials which may be used as teaching aids.
4. Evaluation of materials as to scientific content.
5. Provision of information regarding available community resources.
6. Correlation of health services with the program in health and safety education.

As a curriculum is developed, it becomes obvious in what areas the school nurse-teacher may serve as a consultant in planning and in implementing the teaching units. This consultant service may be to the classroom teacher only. It may be to the pupils on an individual basis, in committee work, or as a classroom activity. The school nurse-teacher may be invited to teach a unit or a segment of a unit in an area in which she is especially qualified, such as personal grooming, first aid, home nursing, etc. Her contribution as an instructor will vary with the grade level of the pupils.

In addition to this specific curriculum planning, the school nurse-teacher will utilize the various routine appraisal procedures, for example, as an opportunity to get into the classroom to supplement the planned program. Special health service activities or problems, such as immunization clinics, prevalence of a communicable disease, or a seasonal safety hazard may provide occasion for further supplementary health education.

The school nurse-teacher does a great deal of individual health teaching or counseling, as it may be more commonly called. Health counseling service is provided for pupils on the occasion of every visit to the health office for emergency care of illness or injury, in relation to the administration of appraisal prodecures, and particularly in relation to follow-through on health problems. Group counseling techniques are used, but less frequently than individual counseling. Health education is also given to parents by the counseling procedure, in relation to appraisal or follow-through activities, care of illness or injury to pupils, or in relation to other specific health problems.

The school nurse-teacher promotes health through education as she serves as a consultant to the administrator and other school personnel in relation to health service activities, healthful school living, teacher health, and special community or school health activities.

We are beginning to realize that the school nurse-teacher, as a health specialist, can make an essential contribution to programs of in-service education for teachers. The curriculum of many teacher-education institutions is or has been inadequate in this area. In addition, there are continual developments in science, as well as changes in opinion and resources. The teacher needs help to adapt health knowledge to the immediate and changing needs of children and of communities. Such in-service education contributes to mental, physical and emotional health of teachers, pupils, and the community.

The school nurse-teacher may also be called upon to carry out teaching functions in relation to co-curricular activities. On the high-school level, we frequently find the school nurse-teacher acting as sponsor of a Future Nurses Club. On the elementary and junior high level, she may sponsor a health club or, more frequently, some group activity such as Junior Red Cross. The school nurse-teacher may be asked to teach or lead discussion sessions for youth groups such as Boy and Girl Scouts and 4–H Clubs—usually in such areas as first aid, home nursing, or child care for babysitters.

Another potential contribution of the school nurse-teacher as a teacher is in the field of adult education. Subjects such as home nursing, first aid, child care and civil defense are occasionally taught by school nurse-teachers. This is a medium for health education which might well be further developed in the future.

It would appear that we could go on indefinitely—listing accepted duties of the school nurse-teacher and pointing out that they are teaching functions. It is true that every aspect of the nursing service provided in the school is related to education. It is the combination of the technical skills of nursing, plus the added professional teaching skills, which enables the school nurse-teacher to make her unique contribution to the health of children and youth.

* * * * *

WHILE HUNDREDS WATCH

RITA MATTHEWS

Oklahoma State Heart Association

Four hundred fifty students sit in their individual classrooms in 13 different Oklahoma City schools. On the television set in front of them they watch a fluoroscope of the human heart and hear the "lub-dub" of the human heart sound.

"This month your heart will beat more than 3,000,000 times."

This is Dr. Jerome D. Shaffer, Oklahoma City physician and volunteer for the Oklahoma State Heart Association, opening a lesson directed to accelerated 9th grade students in television biology. Dr. Shaffer's appearance is another link in a comprehensive educational chain fashioned by the School Health Committee of the Oklahoma State Heart Association. The goal of this educational group is to help school personnel do the best possible job of teaching about the heart and blood vessels.

At the beginning, the educators on the committee reviewed a successfully integrated program of health teaching by radio, which had been undertaken several years ago by the Health Education department of the University of Oklahoma. Under the title, "Spotlight on Health," the program followed a study outline for a year of classroom work, stressing body organs and care in separate lessons. The Heart Association had participated in planning one lesson in the total program prepared for radio pupils in grades five through eight.

Committee members agreed that this was an excellent start in a field, but realized that more could be done to help teachers. The problem faced seemed to be primarily one of communication. If teachers knew materials and other resources were available, they would be more apt to use them.

First, the committee undertook to review all Heart Association pamphlets and films and to suggest appropriate grade levels. Then samples of graded materials were gathered into kits for teachers, complete with order blanks.

To bridge the communications gap, a Heart Association teacher-spokesman spoke to a state meeting of school superintendents in August, 1958 and presented each with a kit. Then two months later teachers

attending the meeting of the Oklahoma Educational Association had an opportunity to visit an exhibit and receive a kit. Their growing interest was seen in the fact that two hundred sixty seven teachers requested the materials in 1958; a year later, at the 1959 meeting, requests were up to 758. For teachers getting their initial preparation, the Heart Committee members planned a comprehensive program on physiology and care of the heart, and offered a program "package" to the teacher education colleges. There was enthusiastic response from the colleges where it has now become a routine addition to the teacher training curriculum.

This concentrated approach to teachers laid the groundwork for the next project undertaken by the School Health Committee: heart teaching through the medium of educational television. Minutes of a meeting October 31, 1958, record the group's decision "to explore the possibility of making heart materials and information available through 5th and 6th grade science classes, junior high biology classes and teachers meetings conducted on Educational Channel 13—KETA-TV."

Coincidentally, the television course coordinator contacted the Heart Association just two days after the recommendation meeting was held. He would like, he said, to set up a specific lesson offering ninth grade pupils a clinician's viewpoint on the heart. In this initial conversation, the committee learned that a special series of television biology classes had just been undertaken in Oklahoma City as a pilot project for the school year, 1958–59. Educators in the new electronic medium were attempting to determine whether or not ninth grade students of over-average mental ability would be able to assimilate a biology course at the advanced level.

Students selected by the counselors in their individual schools were the first to participate in this accelerated science program, designed to meet the demand for more and better science-trained and science-oriented students at the high school level. As explained to the Heart Association educators, the receiving teachers were selected by the Department of Instruction upon the recommendation of principals at the participating schools. These teachers met with George Downing, television biology teacher, and outlined the course as to scope and continuity. It had already been planned that the course itself would be on the basis of a five-day week. The television portion would take 30 minutes on each of three days a week. This gave participating classroom teachers ample opportunity to prepare students for the telecast and to follow-up the telecast with demonstrations, projects, and laboratory procedures which had been prepared beforehand. Two full class periods per week, Tuesday and Thursday, were devoted to full-time laboratory procedures, field trips, film showings, etc.

The ideal situation for a television class, includes an excellent classroom teacher. Television classes then become enrichment vehicles, bringing to the student demonstrations, experiments and resources not feasible for the ordinary biology classroom. Requesting Heart Association help in furnishing resource people, the co-ordinator explained that the general approach in the TV classroom is what is commonly called the "principles" or the "concept" approach in biology. The Heart Association volunteer physicians were asked, therefore, to present broader concepts and principles in biology, rather than unrelated factual materials. There was emphasis on the "open-ended" approach, and individual inquiry is en-

couraged so that each student gains as much information as he is capable of assimilating.

In these terms, the heart and accessory vessels were approached as being incidental to the blood and lymph stream, though a vital part of the human organism. The function of the heart is solely that of a pump, but in this capacity the students were shown that, as the human body developed, this "pump" assumed a place of importance. Following a preliminary presentation on the blood and its constituents, the program on the heart raised the question: How else was the vital fluid, the blood, to be distributed to all parts of the body?

With the broad concepts outlined, the Heart Association staff and Dr. Shaffer worked closely with Mr. Downing, coordinating the information to be presented on television with resource materials available as classroom teaching aids. Kits graded and prepared by the School Health Committee were sent to the teachers, who were invited to order quantities needed for the lesson and follow-up within the classroom. At the same time, Mr. Downing was working with Heart Association Staff and Dr. Shaffer to outline points to be covered in the telecast. A working script was prepared, based on a study guide prepared at the beginning of the course for use by each teacher and student. This guide contained a lesson-by-lesson breakdown of the biology course, and included suggestions for preparation, follow-up and material to be presented. Together with the Heart "kit", this facilitated planning on the part of each teacher in organizing his classwork.

The Heart program in February, 1959, with this preliminary, scored another "first" for educational television in Oklahoma City: it was the first time a physician had been used as a resource person for any television class. In the presentation of the lesson, material was personalized. Interest showed up in the response of classroom teachers and students to the "Heart" section, and paved the way for the additions of physicians as specialty resource people in other fields of medicine, as a routine part of the television biology program.

Continuation of the program series for accelerated students was assured with factual evaluation of the course as a whole. Pre- and post-testing comparisons done by the Testing Department of the Oklahoma City public schools showed gratifying results: accelerated 9th grade students in the pilot study excelled the average 10th grade biology class student by 10–30 percent. Outlines of the program prepared during the year of the Pilot Study formed the basis for teaching during the 1959–60 school year. Again, Dr. Shaffer appeared for the televised lessons on the heart and its function.

Now, Mr. Downing and the Heart Committee are looking to the future, with plans to strengthen the teaching impetus of the program. Possibilities seem limitless, with the use of the 50 physician Speakers Bureau of the Oklahoma State Heart Association. The resource physician has been brought into the classroom through the media of television. Now, volunteer physicians may be asked to make personal visits to the classrooms to answer questions inspired by the telecast. Their job will be a big one; to encourage discussion and questions, to spur the student interest, to personalize further the information available.

The program is new. Its possibilities are numerous. But Oklahoma City educators seem to agree: the concept is here to stay.

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